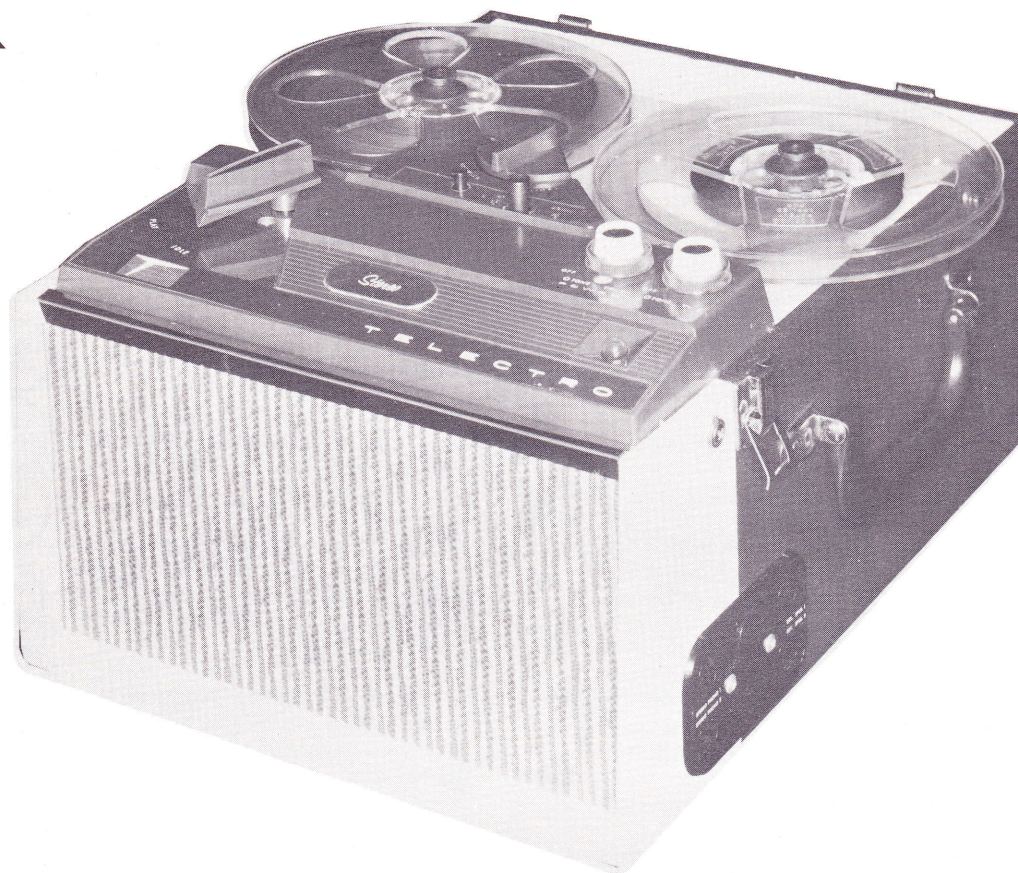
TELECTRO
MODEL 1980TELECTRO
MODEL 1980

GENERAL INFORMATION

Telectro Model 1980 is a two-speed tape player. It will play back dual-track monaural, dual-track stereo, and four-track stereo prerecorded tapes. The two speeds are $3\frac{3}{4}$ and $7\frac{1}{2}$ ips.

The Telectro Model 1980 may be used as a public-address system as well as a tape player.

When both tracks of a monaural prerecorded tape are used, the playing times are as follows:

Reel Size	$3\frac{3}{4}$ Ips	$7\frac{1}{2}$ Ips
3" (300 ft.)	$\frac{1}{2}$ hour	$\frac{1}{4}$ hour
5" (600 ft.)	1 hour	$\frac{1}{2}$ hour

Connect this player to an outlet supplying 110-120 volts, 60 cycles AC only. Before connecting to a line supply, be sure it agrees with these specifications.

Manufactured by:

Telectronic Corporation
35-18 37th Street
Long Island City, New York

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of CQ422

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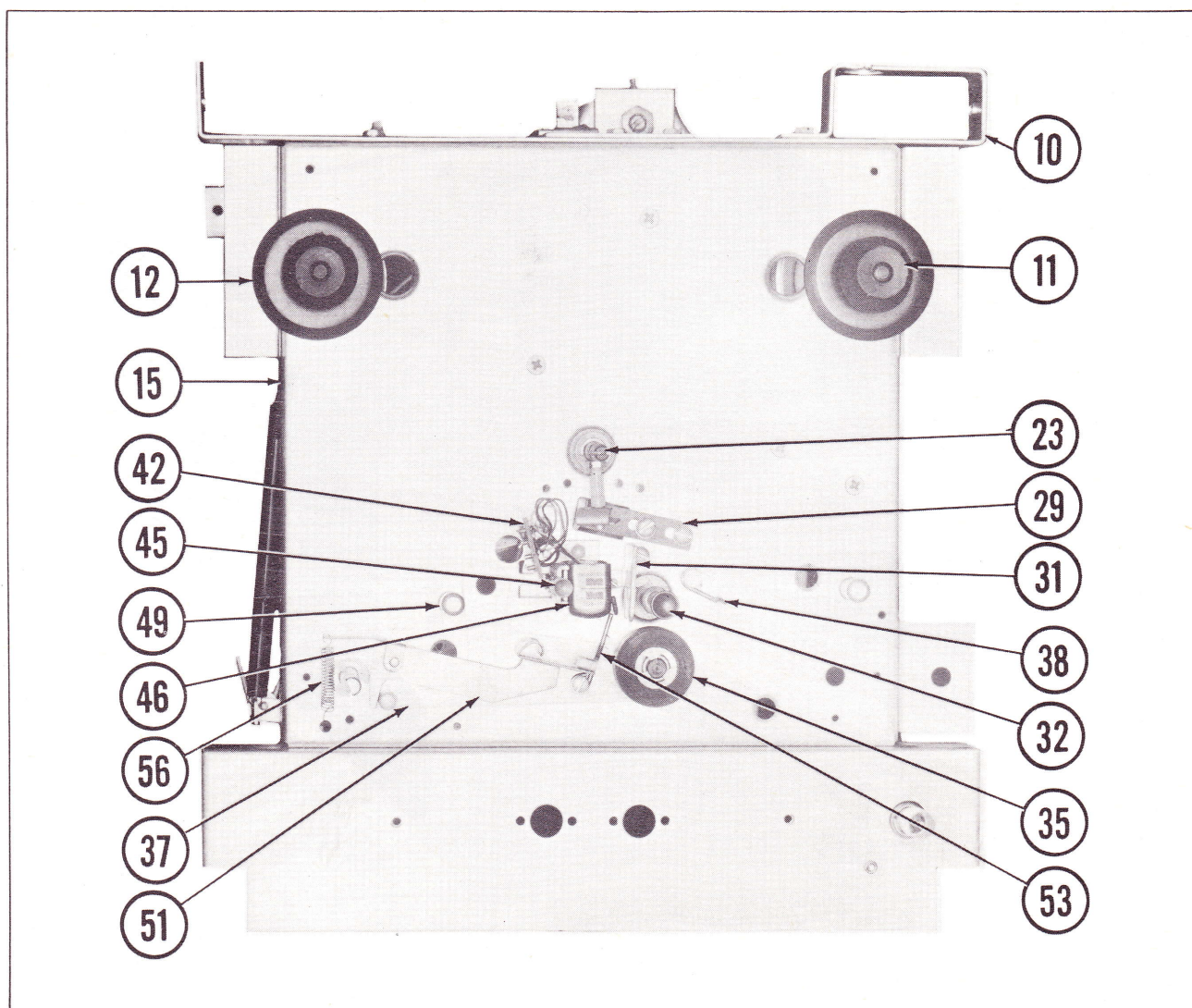


FIG.1 TOP VIEW OF MECHANISM WITH ESCUTCHEON REMOVED

PREPARING FOR OPERATION

1. Open the cover and remove the power cord, empty reel, and reel of tape from the storage space at the rear of the unit.
2. Remove the cover by unlocking the hinges. Place the unit so that the controls are accessible and at a convenient height.
3. Plug the power cord into any AC outlet that has the proper frequency and power requirements.
4. The recorder is now ready for use. Before operating it, the operator should familiarize himself with the controls.

FUNCTION OF CONTROLS

Power On-Off and Volume Control 1

Turning this control until a click is heard turns the power on to the unit. Further rotation of this control increases the volume for channel 1.

Volume Control 2

Rotating this control clockwise increases the volume for channel 2.

Tone Controls 1 and 2

Rotating these controls clockwise increases the trebles (highs); counterclockwise, increases the bass (lows).

Function

Idle is the neutral, or stationary, tape position. Turning the knob to the left, to the Play position, puts the tape in motion.

CAUTION: When not using the tape player, place the Function selector knob in the Idle position.

Head Elevator

When this control is down, the head is set for dual-track monaural and two-track stereo tapes. When it is up, the head is set for four-track stereo tapes.

Wind-Rewind

Turn this control to the right for fast wind; to

the left for fast rewind. The Function selector knob must be placed in Idle before the Wind-Rewind knob is operated.

Speed Change

For 7 1/2 ips, place the Speed Change control in the down position; for 3 3/4 ips, in the up position. Do not change speeds unless the Function selector knob is in Idle.

OPERATING INSTRUCTIONS

Threading the Tape

1. Place a reel of tape on the left (supply) spindle, and an empty reel on the right (take-up) spindle. Make sure the reel slots engage the pins on the spindle.
2. Unwind approximately twelve inches of tape from the left (supply) reel. Hold a section of tape taut, and insert it into the tape slot. Make sure the dull-coated side of the tape faces the rear of the unit.
3. Insert the free end of the tape into one of the three radial slots in the hub of the empty reel. Turn the reel several turns clockwise, until the tape is secured to the reel and all slack is taken up between reels.

To Wind or Rewind Tape

1. Turn the Function selector knob to Idle.
2. To wind the tape onto the reel, turn the Wind-Rewind control to the right, and hold. Release the knob when the desired section of the tape is reached.
3. To rewind the tape, turn the Wind-Rewind control to the left. It will lock into position. To stop the rewind, return the Wind-Rewind knob to the center.

To Play a Monaural Recording

1. Connect an external speaker to external speaker jack 1.
2. Thread the tape (see "Threading the Tape").
3. Make sure the Head Elevator is down.
4. Connect the tape player to an AC outlet of proper rating.
5. Turn on the unit by rotating the Power On-Off-Volume control 1 until a click is heard.
6. Turn the Function control to the Play position.
7. Turn the Volume control until the desired volume is attained.
8. Turn Tone control 1 clockwise to the desired listening level.

To Play a Stereo Recording

1. Connect two external speakers to External Speaker jacks 1 and 2.
2. Thread the tape (see "Threading the Tape").
3. For two-track stereo, make sure the Head Elevator is down. For four-track stereo, make sure it is up.
4. Connect the tape player to any AC outlet of proper rating.
5. Turn the unit on by turning the Power On-Off-Volume control 1 until a click is heard.
6. Turn the Function control to the Play position.
7. Rotate Volume controls 1 and 2 clockwise to increase the volume.
8. Turn Tone control 1 and 2 clockwise to the desired listening level.

Splicing the Tape

1. Overlap the broken ends and cut at a 45-degree angle.
2. Butt the two ends together, with the glossy side up.
3. Tape the butted ends together with splicing tape.
4. Trim off the excess splicing tape.

To Use Unit as a Public-Address System

1. Plug the unit into an AC outlet of the proper rating.
2. Turn the unit on by turning the Power On-Off-Volume control 1 until a click is heard.
3. Plug a microphone into the upper Phono jack.
4. Connect an external speaker into the upper External Speaker jack.
5. Readjust Volume control 1 to the desired sound level.

TELECTRO
MODEL 1980

FOLDER 15

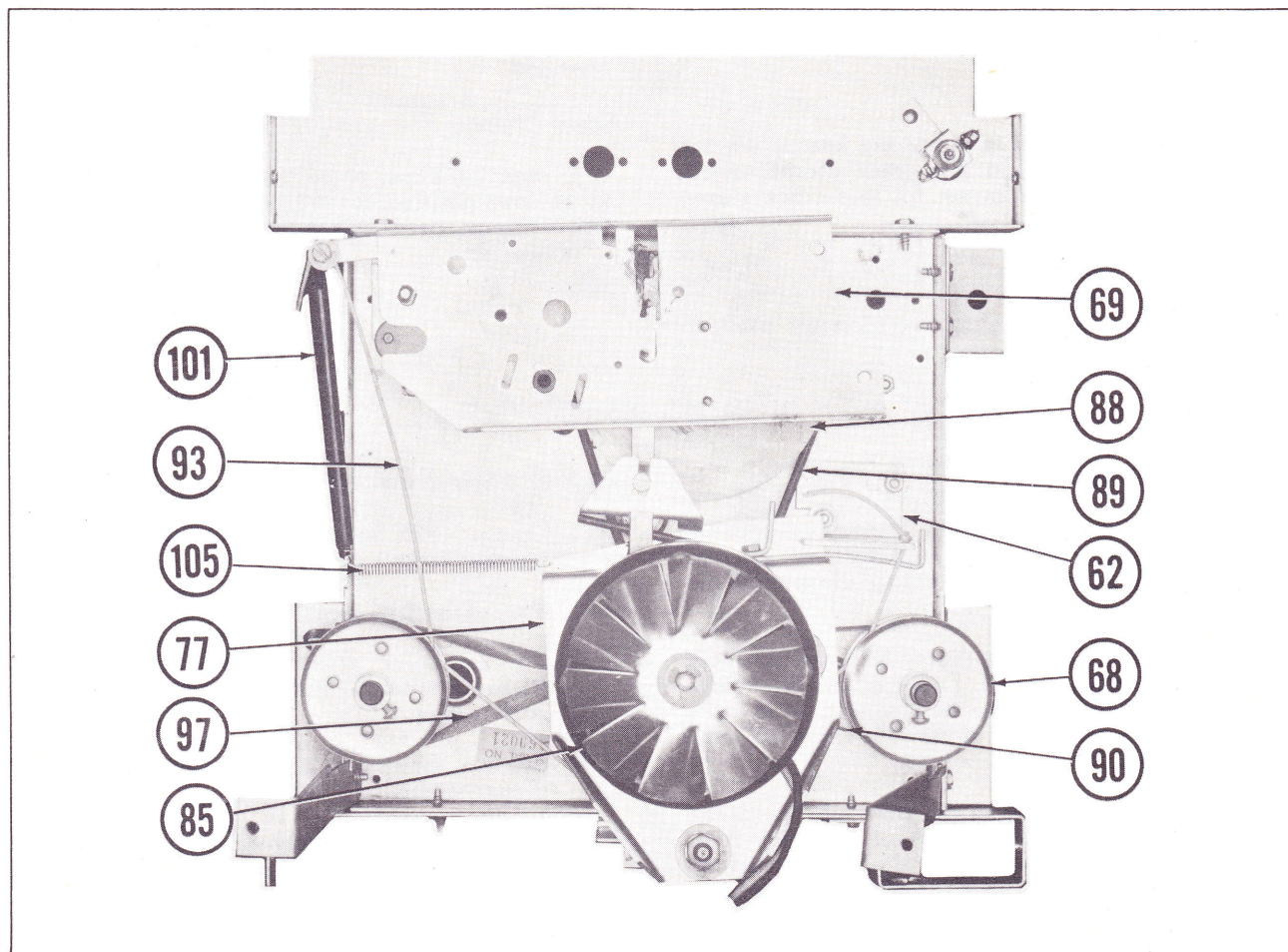


FIG.2 BOTTOM VIEW OF MECHANISM

DISASSEMBLY

To Remove Tape Player from Cabinet

1. Remove the four screws from the bottom of the cabinet.
2. Remove the four screws (two on each side) on the side of the cabinet.
3. Remove the two screws holding the jack plate, on the side of the cabinet.
4. Lift the unit from the cabinet.
5. To reassemble, reverse the foregoing procedure.

2. Disconnect the indicator light.

3. Remove the power cord from the holder on the tape transport.
4. Disconnect the motor leads.
5. Remove the three screws holding the amplifier to the tape transport.
6. Lift the amplifier from the tape transport.
7. To reassemble, reverse the foregoing procedure.

To Remove Amplifier from Tape Transport

1. Disconnect the head leads.

MECHANICAL ADJUSTMENTS

Playback head (46) must be aligned with the tape. If it is not, low output, loss of high frequencies, or

track overlap may result.

CAUTION: The playback head has been adjusted at

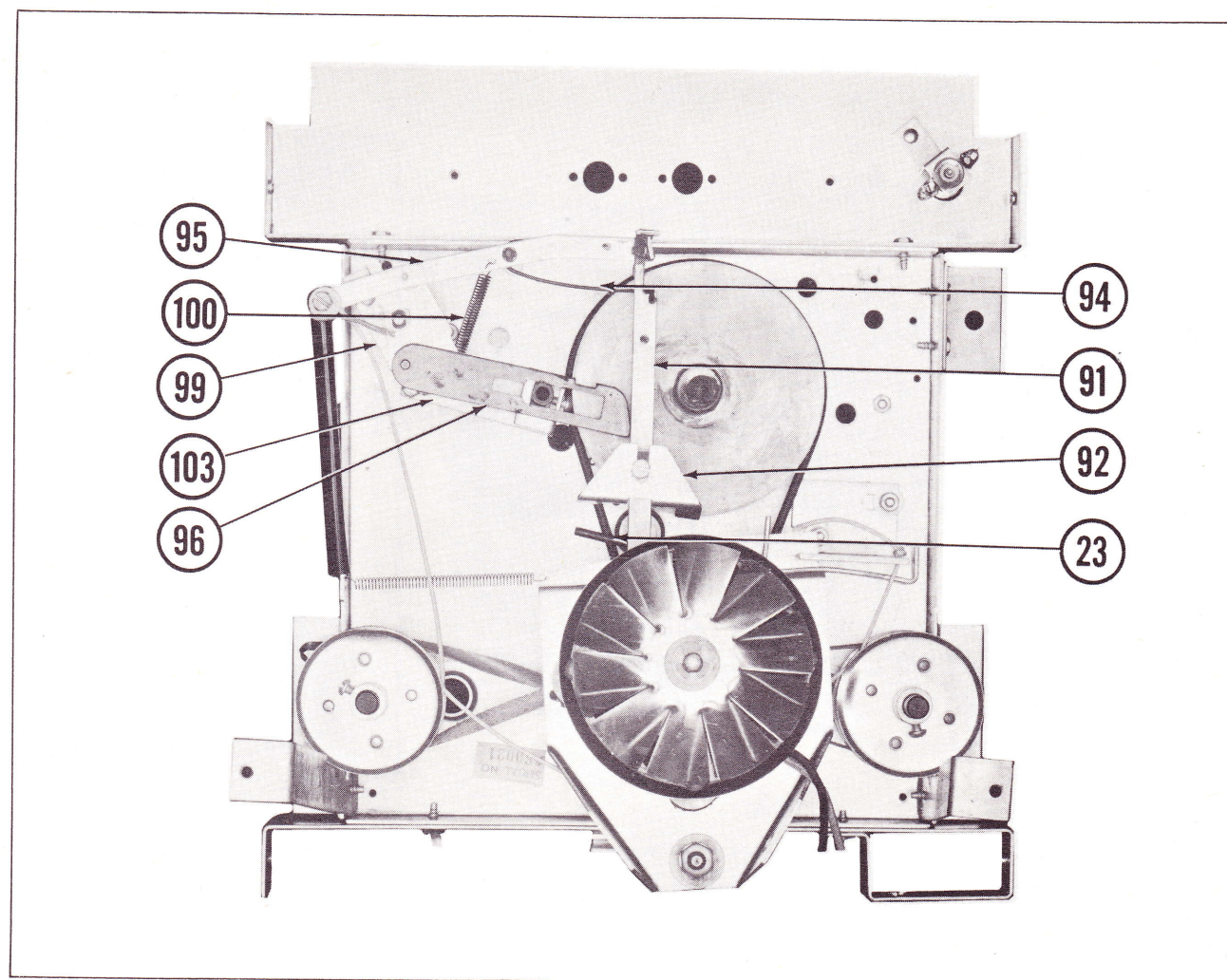


FIG.3 BOTTOM VIEW OF MECHANISM WITH MOTORBOARD SUBPLATE REMOVED

the factory. Further adjustment is unnecessary unless the head becomes faulty and is replaced. Two adjustments should then be made (see the following).

1. Adjust the head height so that the top of the tape is aligned with the top of the head lamination. To adjust, loosen nuts (46A), and slightly raise or lower head (46).
2. Turn head adjustment screw (46B) to the left or right to adjust the head for maximum frequency response. This moves the head from side to side slightly. After completing this adjustment, check the head height.

Brake Release Bracket

Adjust brake release bracket (92) by loosening screw (92A) and moving the bracket forward or backward. When the bracket is moved to the rear of the unit, wind-rewind lever assembly (23) contacts it, giving brake cord (93) more slack. For less slack, reverse the foregoing procedure.

Spindle End Play

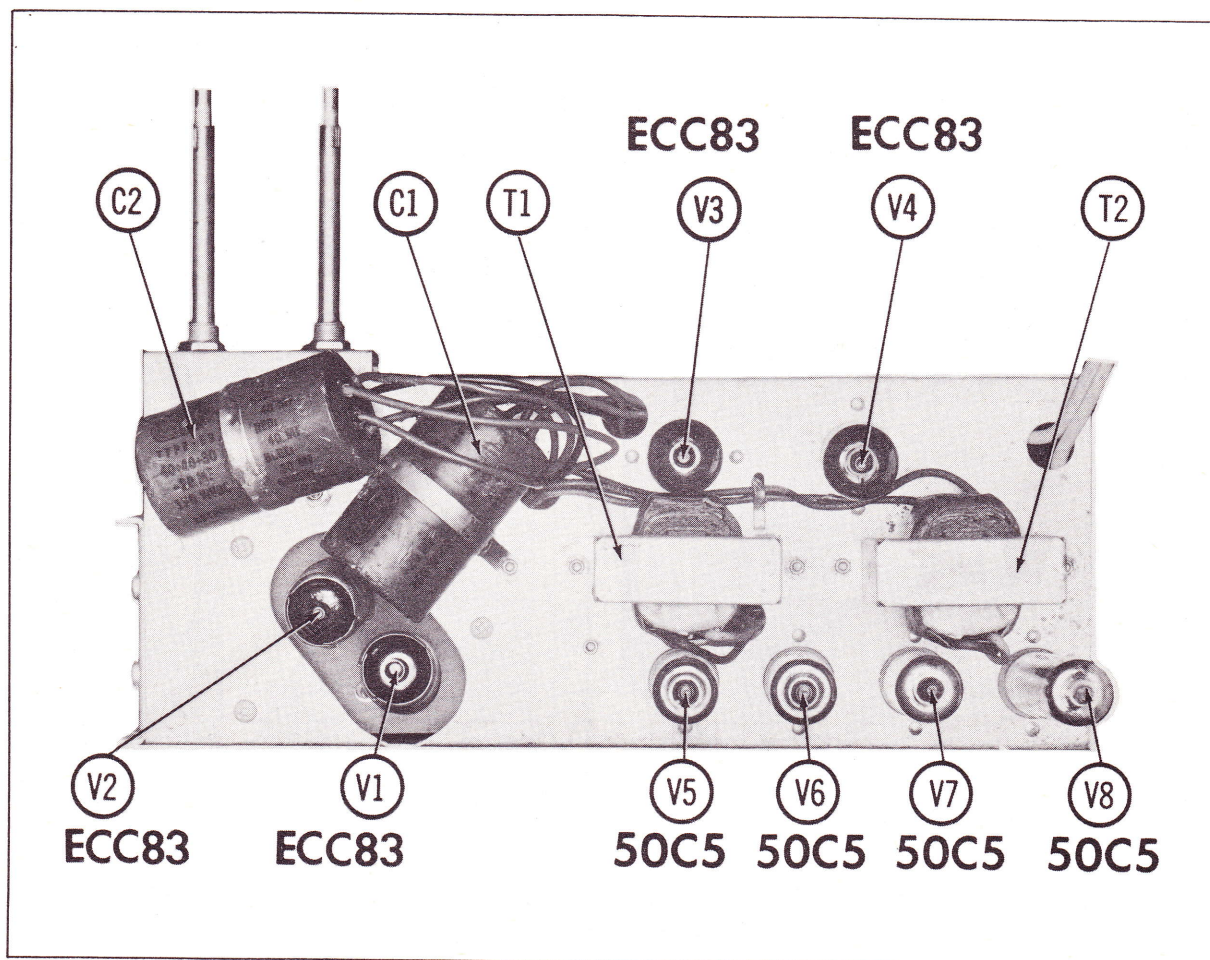
The spindles should have 1/32 to 1/16 inch up and down movement. To obtain the correct amount of end play, loosen set screws (67) in upper pulley (66) and lower pulley (68), and move the pulleys up or down.

TROUBLE CHART

Symptom	Cause	Remedy
No drive in playback.	1. Rubber drive belt (89) loose or broken.	1. Replace drive belt (89).

TROUBLE CHART (CON'T.)

Symptom	Cause	Remedy
	2. Take-up belt (90) loose or broken.	2. Replace take-up belt (90).
	3. Defective motor (81).	3. Replace motor (81).
	4. Connecting leads fouling fan (85).	4. Dress the leads so that they do not touch fan (85).
	5. Flywheel and capstan shaft binding.	5. Clean and lubricate the flywheel and capstan shaft.
	6. Take-up spring (105) disconnected or defective.	6. Reconnect or replace take-up spring (105).
Wow.	1. Dirty or oily capstan sleeve assembly (32), capstan roller (35), or motor pulley (81).	1. Clean with soft cloth and alcohol.
No wind or rewind.	1. Drive belt (89) loose or broken.	1. Replace drive belt (89).
	2. Take-up belt (90) or rewind belt (97) loose or broken.	2. Replace take-up belt (90) or rewind belt (97).
	3. Oil or grease on driving surfaces.	3. Clean with soft cloth and alcohol.
Function control does not operate.	1. Brake spring (98) broken or disconnected.	1. Replace or reconnect brake spring (98).



AMP CHASSIS-TOP VIEW

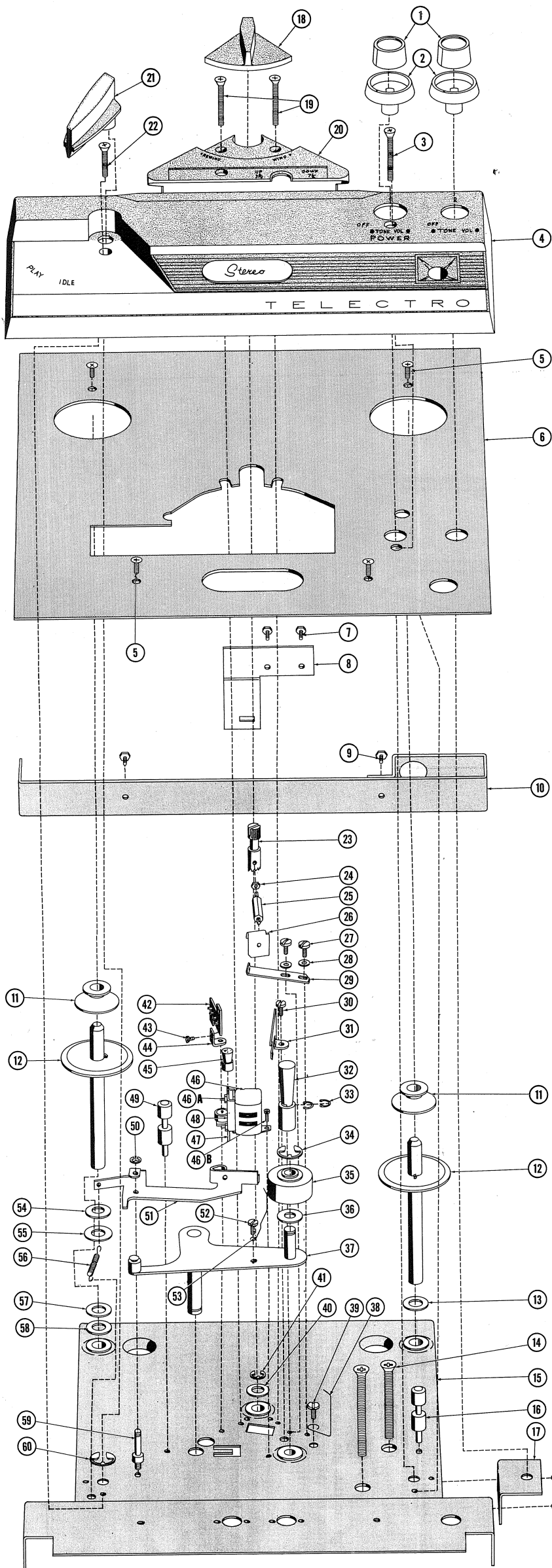


FIG. 4A EXPLODED VIEW OF PARTS ABOVE BASEPLATE

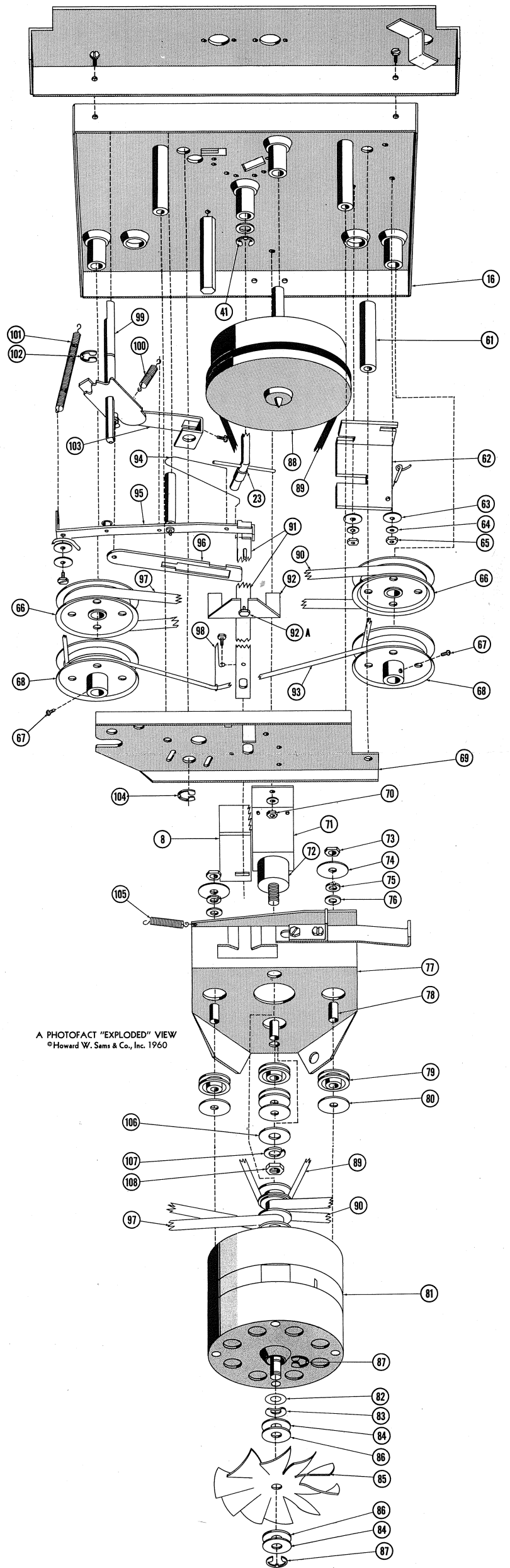


FIG. 4B EXPLODED VIEW OF PARTS BELOW BASEPLATE

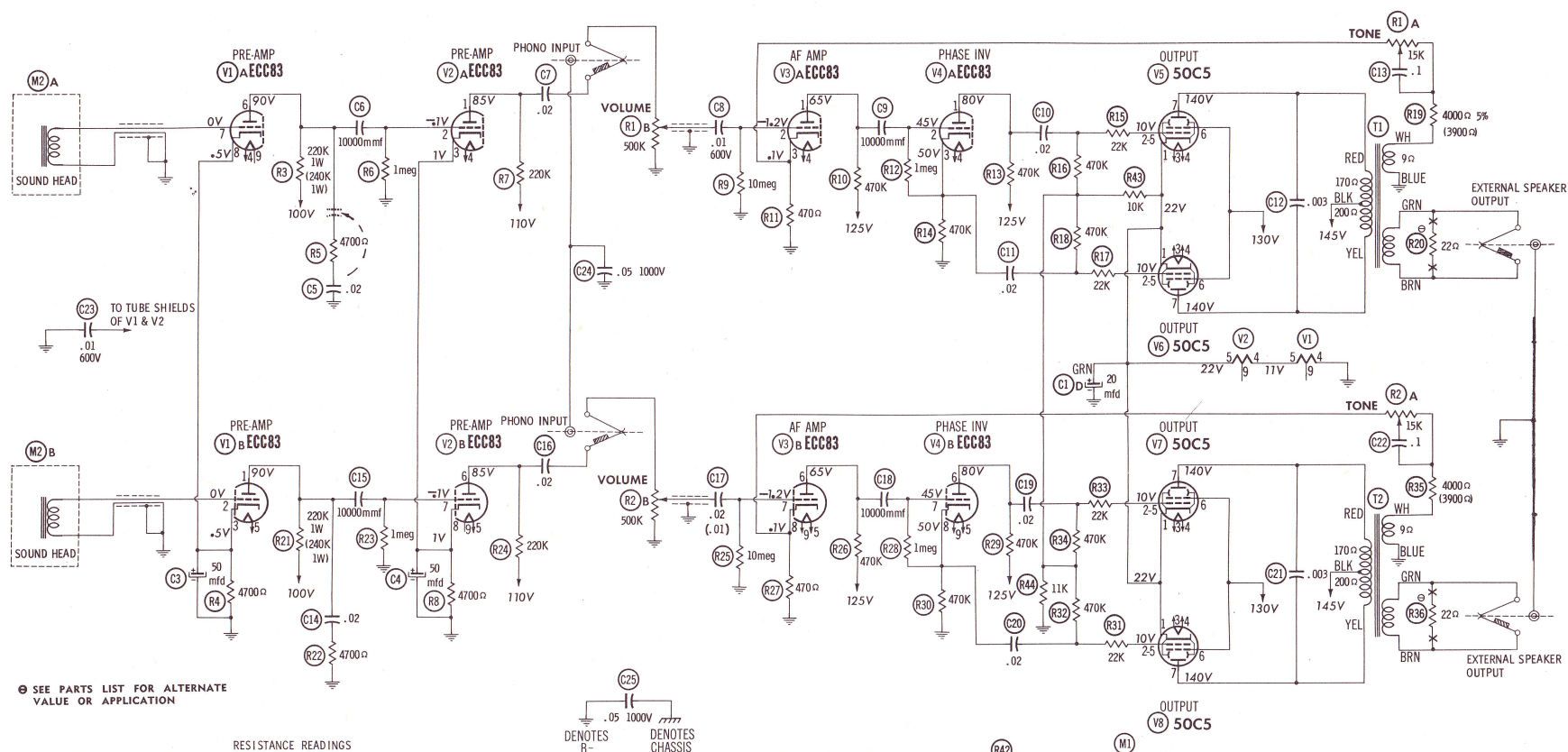
MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	TK255	Volume-On-Off Knob	55		.315 I.D. x 9/16 O.D. x .010 Flat Steel Washer
2	TK254	Tone Control Knob	56	TS1931	Pressure-Pad Spring
3		6-32 x 1 1/8 Fl. Phil. Hd. M. Screw	57		.315 I.D. x 1/2 O.D. x .032 Fiber Washer
4	TA1437	Front Escutcheon Ass'y.	58		.315 I.D. x 9/16 O.D. x .010 Flat Steel Washer
5		6-32 x 5/16 Lg. Truss Phil. Hd. M. Screw	59		Pressure-Pad Bracket Ass'y.
6	TP1098	Motorboard Dress Plate	60		Mtg. Stud
7		1/4 Hex Hd. Self-tapping Screw			Switch Shaft & Cam Ass'y. Retaining Ring
8	TB2009	Brake Rod Guide Bracket	61	TS2029	Motorboard Subplate Spacer
9		1/4 Hex. Hd. Self-tapping Screw	62	TB619	Bracket Excursion Limit
10		Motorboard Mounting Bracket	63		Flat Washer
11		Reel Retainer	64		Flat Washer
12	TA1105	Spindle	65		Hex Nut
13		.315 I.D. x 9/16 O.D. x .010 Washer	66	TA265	Upper Pulley
14		Motorboard Subplate and Amplifier Mounting screws (3)	67		Set Screw
15	TT712	Tape Guide Post	68	TA1183	Lower Pulley
16		Baseplate	69	TA1205	Motorboard Subplate
17		Bracket-Part of Baseplate	70		Hex Nut
18	TK243	Wind-Rewind Knob	71		Motor Pivot Mtg. Bracket
19		6-32 x 1 1/8 Fl. Phil. Hd. M. Screw (2)	72		Motor Pivot
20	TE277	Rear Escutcheon	73		Hex Nut
21	TA1439	Function Knob	74		Flat Washer
22		6-32 x 3/4 Fl. Phil. Hd. M. Scr.	75		Lockwasher
23	TA1121	Wind-Rewind Lever Ass'y.	76		Flat Washer
24		6-32 Hex Nut	77	TB2003	Motor Mtg. Bracket
25	TP983	Hex Shaft	78		Motor Mtg. Sleeve
26	TL344	Wind-Rewind Latch	79	TM415	Rubber Motor Shock Mount
27		6-32 x 3/16 Screw	80		Flat Washer
28		Lockwasher No. 6	81	TA1438	Motor & Pulley Ass'y.
29	TS1854	Spring	82		Retaining Ring
30		Tape Guide Bracket Screw	83		Flat Washer
31	TB2007	Tape Guide Bracket	84		Fiber Washer (2)
32	TA1204	Capstan Sleeve Ass'y.	85	TF258	Fan
33		Capstan Sleeve Ass'y. Retaining Rings (2)	86		Felt Washer (2)
34	5133-25	Pressure Roller Retaining Ring	87		Fan Retaining Ring
35	TA1002	Pressure Roller	88	TF304	Flywheel Ass'y.
36		Pressure Roller Washer .255 I.D. x 1/2 O.D. x .010	89	TO171	Linear "O" Ring Drive Belt
37	TA1186	Capstan Roller Plate Ass'y.	90	TB998	Take-up Belt
38	TG414	Tape Guide, Upright	91	TA1128	Brake Rod Subassembly
39		#6 x 1/4 Lg. Hex Slotted Sht. Met. Type Z.	92	TB858	Brake Release Bracket
40		.255 I.D. x 1/2 O.D. x .010 Flat Washer	92A		#6 x 1/4 Self-tapping Screw
41	5103-25	Wind-Rewind Lever Retaining Ring	93	TB1004	Brake Cord (25" Long)
42	TB2001	Head Lead Terminal Board	94	TS1657	Brake-Rod Return Spring
43		Head Lead Terminal-Board Screw	95	TA1004	Switch Detent Lever Ass'y.
44	TB2006	Terminal-Board Bracket	96	TS1625	Interlock Slide
45	TK256	Head-Elevation Knob	97 *	TB999 *	* Rewind Belt
46	TH557	1/4 Track Head	98	TS1658	Brake Spring
46A		#2 Hex Nut	99	TA1209	Switch Shaft & Cam Ass'y.
46B		Head Adjustment Screw	100	TS1681	Capstan-Roller Plate Lever Spring
47	TB2028	Head Mounting Bracket	101	TS1905	Switch-Detent Lever Spring
48	TP1150	Head Lifting Sliding Plate	102		Switch Shaft & Cam Ass'y. Retaining Ring
49	TT712	Tape-Guide Post	103	TA1122	Capstan-Roller Plate Cam Lever Ass'y.
50	5133-12	Pressure-Pad Bracket Ass'y. Retaining Ring	104		Capstan-Roller Plate Ass'y. Retaining Ring
51	TA1125	Pressure-Pad Bracket Ass'y.	105	TS2022	Take-up Spring
52		Tape-Release Guide Mtg. Screw, 440 x 3/16 Phil.	106		Flat Washer
53	TG419	Tape-Release Guide	107		Lockwasher
54		.315 I.D. x 1/2 O.D. x .032 Thk. Fiber Washer	108		Hex Nut

* Rewind Belt Walsco Part No. 1409-04

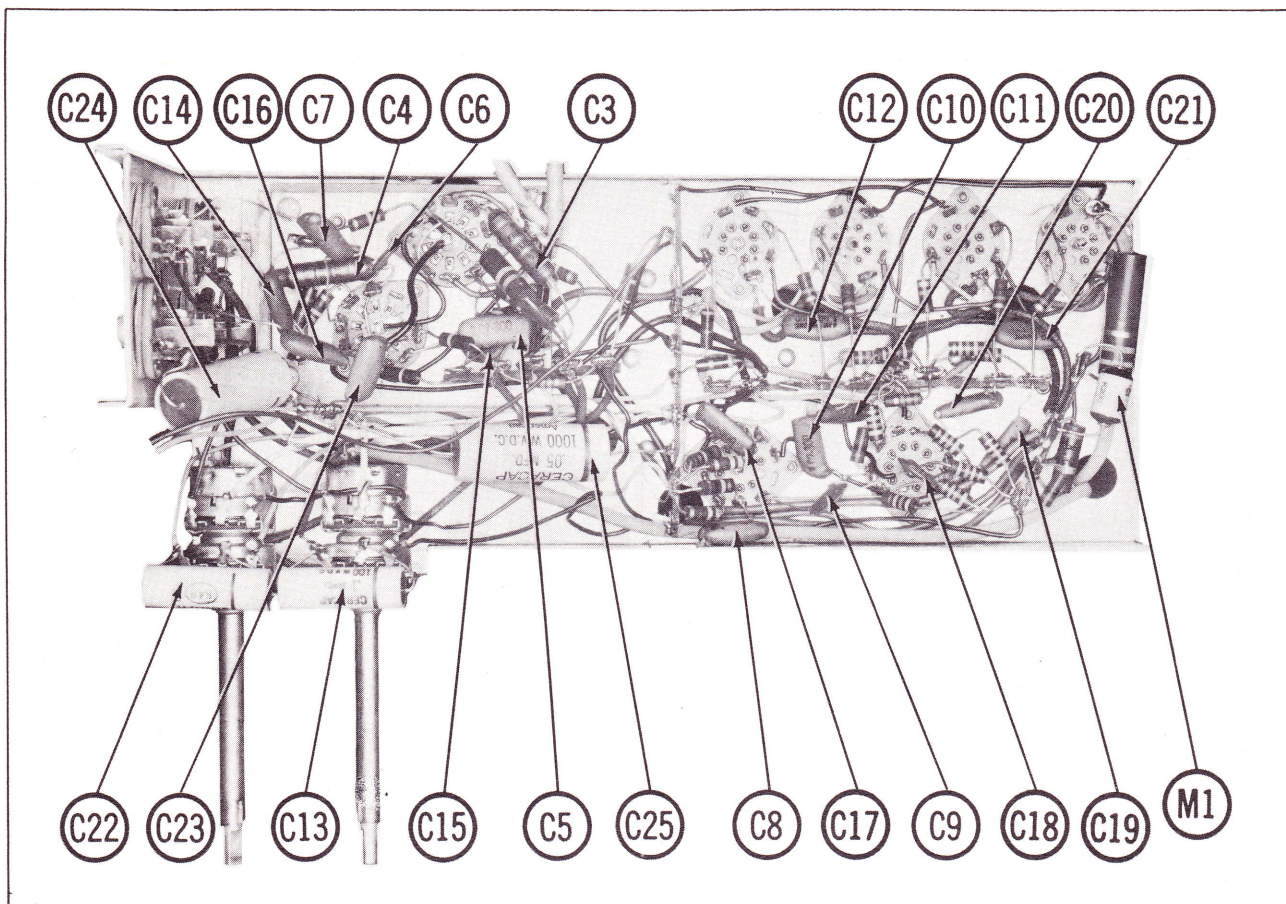
TELECTRO
MODEL 1980

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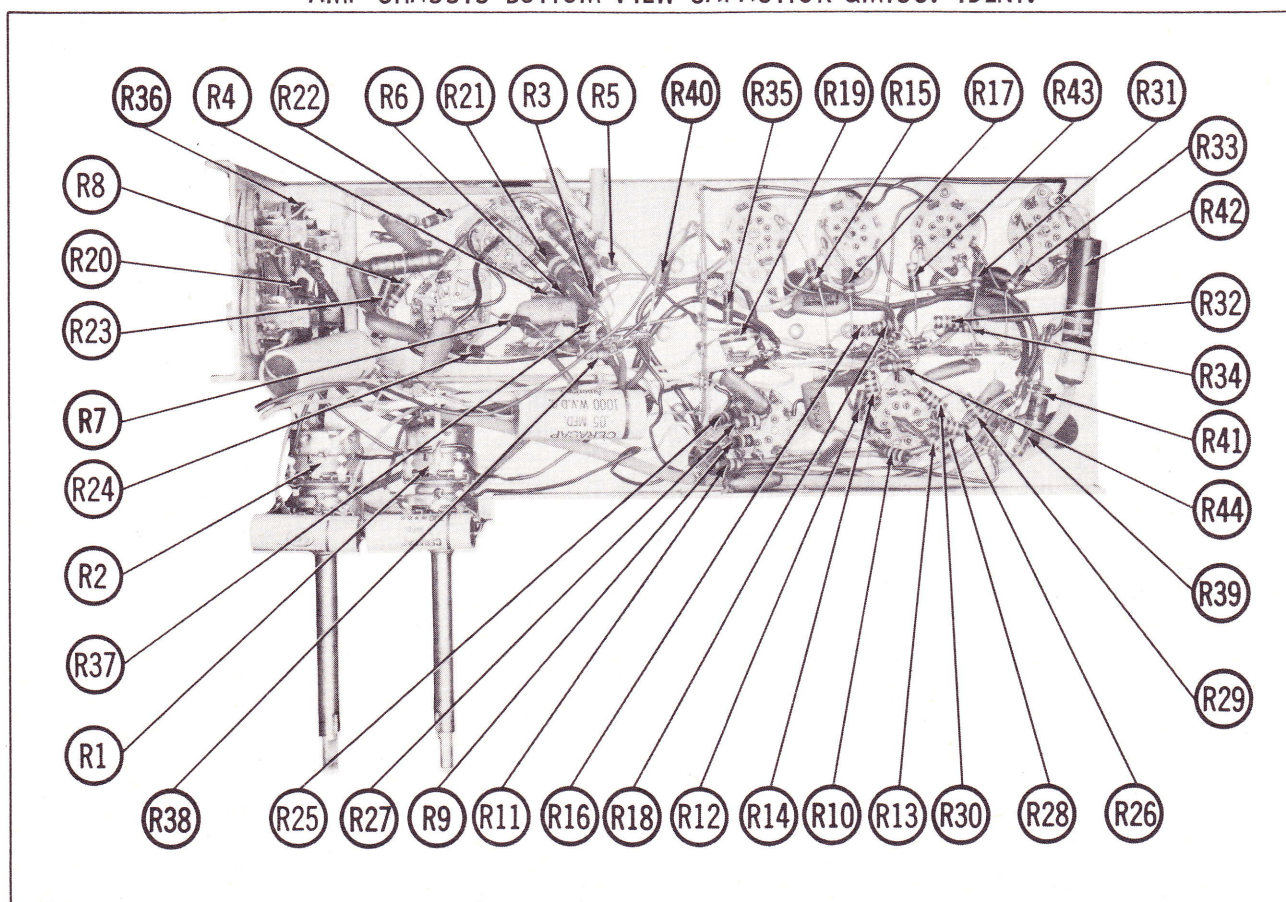


A PHOTOFACIT STANDARD NOTATION SCHEMATIC
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TELETRON
MODEL 1980



AMP CHASSIS BOTTOM VIEW-CAPACITOR & MISC. IDENT.



AMP CHASSIS BOTTOM VIEW-RESISTOR IDENT.

AMP PARTS LIST AND DESCRIPTIONS

TUBES

CBS			GENERAL ELECTRIC			RAYTHEON			SYLVANIA		
ITEM No.	USE		TYPE			ITEM No.	USE		TYPE		
V1	Channel A Preamplifier -		ECC83/12AX7			V4	Channel A Phase Inv. -		ECC83/12AX7		
V2	Channel B Preamplifier -		ECC83/12AX7			V5	Channel B Phase Inv.		50C5		
V3	Channel A Preamplifier -		ECC83/12AX7			V6	Channel A Output		50C5		
	Channel B Preamplifier -		ECC83/12AX7			V7	Channel A Output		50C5		
	Channel A AF Amplifier -		ECC83/12AX7			V8	Channel B Output		50C5		
	Channel B AF Amplifier		ECC83/12AX7								

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TELECTRO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	NOTES
	CAP.	VOLT.							
C1A	40	150	TC-1192	PRS3800	BBRT44215 BR3015	WQ795	TDLT-4 TD-30-150	TVA-3448 TVA-1413	
B	40	150							
C	30	150							
D	20	150							
C2A	40	150	TC-1192	PRS3675	BBRT44215 BR3015	WT217 TC47	TDLT-4 TD-30-150	TVA-3448 TVA-1413	
B	40	150							
C	30	150							
D	20	150							
C3	50	3	TC-1550	XPP-3050	NLW50-3	TT6X50	ML50-3	TE-1058	
C4	50	3	TC-1550	XPP-3050	NLW50-3	TT6X50	ML50-3	TE-1058	

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REMARKS	REPLACEMENT DATA							
				AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.		
C5	.02	300V	Note 1	P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C6	10000			BPD-01	DD-103	BYA10S1	CCD-103	GP110	5HK-S10		
C7	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C8	.01	600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S1		
C9	10000			BPD-01	DD-103	BYA10S1	CCD-103	GP210	5HK-S10		
C10	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C11	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C12	.003	300V		P488N-003	DD-302	CUB6D3	6DP-1-302	GEM-623	6TM-D3		
C13	.1	100V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P1		
C14	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C15	10000			BPD-01	DD-103	BYA10S1	CCD-103	GP110	5HK-S10		
C16	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C17	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C18	10000			BPD-01	DD-103	BYA10S1	CCD-103	GP110	5HK-S10		
C19	.02	300V		P488N-02	DD-203	CUB4S2	4DP-2-203	GEM-412	4TM-S2		
C20	.02	300V		P488N-02	DD-203	CUB6S2	4DP-2-203	GEM-412	4TM-S2		
C21	.003	300V		P488N-003	DD-302	CUB6D3	6DP-1-302	GEM-623	6TM-D3		
C22	.1	100V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P1		
C23	.01	600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S1		
C24	.05	1000V		P1088N-05	DD-503	CUB10S5	16DP-5-503	GEM-1015	10TM-S5		
C25	.05	1000V		P1088N-05	DD-503	CUB10S5	16DP-5-503	GEM-1015	10TM-S5		

Note 1. Some versions may use .01mfd in this application.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES	
	RESIST-ANCE	WATTS	TELECTRO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS - IRC PART No.	MALLORY PART No.		
R1A	15K	1/2W	TC-1694	F1-27		† QJ-1205R	■ UE3905-S	Tone, Channel A Volume, Channel A Power Off-On	
B	500K			R2-41					
C	Switch	1/2W	TC-1694	KR-1			■ UE3905-S		Tone, Channel B Volume, Channel B (Not used)
R2A	15K			F1-27					
B	500K			R2-41					
C	Switch			KR-1					

† "Concentrikit" Equivalent: K-6 kit with base elements and shafts: B11-118, P13-217 (Panel)
(Not available as a factory assembled unit) B13-133, R1-300 (Rear)

■ "STA-LOC" Equivalent: FA153L, RU55A, OS-2562, IS3000, US41.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R3	220K 1W	(240K 1W) *	R17	22K	(3900Ω) *	R31	22K	(3900Ω) *
R4	4700Ω		R18	470K		R32	470K	
R5	4700Ω		R19	4000Ω 5%		R33	22K	
R6	1meg		R20	22Ω		R34	470K	
R7	220K		R21	220K 1W	(240K 1W) *	R35	4000Ω	(3900Ω) *
R8	4700Ω		R22	4700Ω		R36	22Ω	
R9	10meg		R23	1meg		R37	68K	
R10	470K		R24	220K		R38	47K	
R11	470Ω		R25	10meg		R39	1000Ω	
R12	1meg		R26	470K		R40	220K	
R13	470K		R27	470Ω		R41	1000Ω 1W	
R14	470K		R28	1meg		R42	6.8Ω 2W	
R15	22K		R29	470K		R43	10K	
R16	470K		R30	470K		R44	11K	

* Alternate Value.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA							NOTES
	PRI.	SEC.1	TELECTRO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	4500Ω	3-4Ω	TT-674B *							* Alternate Part #TT-674
	CT	SEC.2								
		45Ω								
		SEC.1								
T2	4500Ω	3-4Ω	TT-674B *							
	CT	SEC.2								
		45Ω								

RECTIFIERS

ITEM No.	RATING		TELECTRO PART No.	INTERNATIONAL PART No.	ITT PART No.	SARKES TAZIAN PART No.	SYLVANIA PART No.	NOTES
	CURRENT (Measured)							
M1	.140A		TD-315 *	SD-500 *	HA154 *	K200 *	SR200 *	* Silicon Type

MISCELLANEOUS

ITEM No.	PART NAME	TELECTRO PART No.	NOTES
M2	Head	TH-557	Play (Part of Transport)
M3	Motor	TA-1438	Drive (Part of Transport)

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	TK-255	Volume
Knob	TK-254	Tone
Knob	TK-256	Head Elevation

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)